Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Advanced Television Systems	)	
and Their Impact Upon the	)	**MM Docket No. 87-268**
Existing Television Broadcast	)	
Service	)	
		DOCKET FILE COPY ORIGINAL
Fifth Further Notice of	)	
Proposed Rule Making	)	

FURTHER COMMENTS OF DOLBY LABORATORIES

I. Introduction

Pursuant to the Commission's Public Notice (FCC 96-465) dated November 27, 1996, Dolby Laboratories (Dolby) hereby submits the following comments on the agreement regarding technical standards for digital television (DTV) recently reached among representatives of the television broadcasting, consumer electronics manufacturing and computing industries.

Dolby welcomes this agreement as a means of resolving the controversy which has delayed FCC action on adoption of the ATSC DTV Standard. We believe that the specific video pixel, scanning, and frame rate parameters can be left to voluntary industry

standardization. We applaud the efforts of the representatives of the broadcast, consumer, and computer industries who produced this workable compromise, and we strongly urge prompt Commission action to adopt this welcome industry consensus prior to the expiration of the agreement on Dec. 31, 1996.

Under the agreement, the Commission would adopt all of the major technology elements of a complete DTV system, including the video encoding format (MPEG-2), the audio encoding format (AC-3), the multiplexing format (MPEG-2), and the transmission format (VSB). All of these elements have been developed, tested, and shown to work as part of the Advisory Committee process. The comments in this proceeding have contained little criticism of these elements. Other elements, such as optional video, audio, or other data types are readily accommodated by the Standard, as specifically pointed out in item 3 and attachment A of the agreement.

Dolby is aware that a few comments in this proceeding have asked the Commission not to specify the audio coding format of the DTV Standard. These comments have come from the proponents of one particular proprietary[1] audio coding system. These proponents ask that the Commission specify a general purpose audio decoding hardware/software system, and that the actual audio decoding algorithm be downloaded by the broadcaster. Dolby has dealt with these issues in detail in our reply comments in this proceeding and will not repeat our arguments here. We would like to reiterate the major point that a known decoding algorithm leads to a lower cost implementation compared to a generalized algorithm. A general purpose DSP chip typically has a chip area measured in

[1] By proprietary, we mean not the subject of a Standard. The AC-3 system is both a ***nationally*** (ATSC Standard A/52) and ***internationally*** (ITU-R Recommendation BS.1196) recognized system.

the many 10's to more than 100 square millimeters of silicon. We are currently seeing the development of specialized AC-3 decoder chip designs which only occupy a few square millimeters of silicon. The impact of this sort of design efficiency is that the audio decoding function will occupy a small portion of a larger system chip, rather than existing as a stand alone audio decoding IC. The reduction in receiver cost with a specified audio algorithm is significant. Lower cost receivers will allow faster market penetration and quicker recovery of the valuable transition broadcast spectrum which will be loaned to the broadcasters.

Dolby is disappointed that some members of the film community (the "Film Coalition") are still not fully supportive of the Standard[2] due to the lack of certain mandates on aspects of artistic presentation (primarily aspect ratio). However, we believe that the Standard does allow a very high quality presentation of film material, and we further believe that the Standard will be typically be used to deliver films in the appropriate aspect ratio with progressive scanning. Current practice with NTSC is often to alter both the picture and the sound of motion pictures. The reason for these practices is that the NTSC system simply cannot deliver film images without either significantly compromising the picture resolution, and/or the aspect ratio; nor can NTSC television deliver the discrete 5.1 channel film soundtrack with its original dynamic range intact. While we ask for no mandate that the original soundtrack be delivered intact, the DTV Standard provides a method (the AC-3 audio coding system) whereby this can be accomplished. The ATSC DTV Standard provides the tools which will allow films to be broadcast with much higher quality than is now the case with NTSC. Dolby firmly believes that the marketplace will

[2] We believe that many others in the film community do support the Standard.

use embrace and use these tools, and that the presentation of film material will be greatly improved over current practices. Active participation of the film community in the activities of SMPTE and ATSC will help the industry achieve this goal.

Many years have been spent debating the issues. The major industries have now arrived at a substantial consensus. The Commission should, prior to the year end, adopt ATSC DTV Standard with the exception of the specific video format constraints. This critically important leadership action by the Commission will allow industry and consumers to quickly realize the myriad of benefits of the Standard, including a rapid and successful transition from analog to higher quality digital terrestrial television.

Respectfully submitted,

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